Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Modernizing the E-rate Program for Schools and Libraries	)	WC Docket No. 13-184
	)	
	)	
	)	

To: The Commission

REPLY COMMENTS OF
CTIA – THE WIRELESS ASSOCIATION®

Michael F. Altschul
Senior Vice President and General Counsel

Scott K. Bergmann
Vice President, Regulatory Affairs

Brian M. Josef
Assistant Vice President, Regulatory Affairs

CTIA – The Wireless Association®
1400 16th Street, NW, Suite 600
Washington, DC 20036

(202) 785-0081

November 8, 2013

TABLE OF CONTENTS

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Modernizing the E-rate Program for Schools and Libraries	)	WC Docket No. 13-184
	)	
	)	
	)	

To: The Commission

REPLY COMMENTS OF
CTIA – THE WIRELESS ASSOCIATION®

CTIA – The Wireless Association® ("CTIA") presents these reply comments to emphasize initial commenters' strong support for mobile broadband as an integral technology platform for education, both inside and outside the classroom.[1] Consistent with this strong support, the FCC should reform E-rate to recognize and support the educational value of mobile broadband by extending the E-rate Deployed Ubiquitously pilot program and by adopting a technologically neutral approach that leaves technology decisions to the individual applicants.

I. INTRODUCTION AND SUMMARY

The massive response to the NPRM demonstrates the strong public interest in modernizing the E-rate program to better meet educator and student needs.[2] Many commenting educators recognize the value of mobility in 21st Century education, observing that mobile

[1] *Modernizing the E-rate Program for Schools and Libraries*, WC Docket No. 13-184, Notice of Proposed Rulemaking, FCC 13-100 (rel. July 23, 2013) ("NPRM"). Unless otherwise noted, references to parties' comments refer to initial comments in this docket filed on or about September 16, 2013.

[2] Approximately 340 comments were filed between September 13 and September 16, totaling more than 3,700 pages.

broadband is critical for enabling anywhere, anytime access and for facilitating access in rural areas where fiber deployment is uneconomic. In particular, the record reflects significant educator and other support for building upon the E-rate Deployed Ubiquitously pilot program to provide off-campus wireless broadband access to students. This access is particularly important for rural and impoverished communities, as commenters point out.

The Commission should maintain its USF principle of competitive and technological neutrality rather than dictate a one-size fits all solution. A technologically neutral approach will accommodate schools' and libraries' full range of needs by allowing educators to determine what technologies best fit the needs of their students.

II. MANY COMMENTERS RECOGNIZE THE VALUE OF MOBILITY IN 21ST CENTURY EDUCATION

The record shows that mobile broadband is an integral part of the connected digital learning environment described in the NPRM. The record shows that one of the principal benefits of new educational technology is an anywhere, anytime learning environment. As the Los Angeles Unified School District points out, "[s]martphones and tablets, when used with 3G/4G/LTE mobile broadband access, allow students to learn on a 24/7 basis, which can dramatically improve educational achievement."[3] Off-campus mobile access is particularly beneficial to students in impoverished and rural areas, who otherwise lose connectivity when they leave school.[4] As the Quilt notes, "[e]ducation does not end at when school is out for the day" and therefore "E-rate reform must address home connectivity for underserved students in

[3] Los Angeles Unified School District Comments at 10. *See also* Connected Nation Comments at 14-15; Letter from Christopher J. Dede and James E. Ryan, Harvard Graduate School of Education, to the FCC, at 1 (Sept. 7, 2013) ("Harvard Graduate School Comments"); NACEPF Comments at 4-9 (the importance of learning outside the school building is well-supported).

[4] Competitive Carriers Association Comments at 7-12; Iowa Dept. of Edu. Comments at 6-7; San Diego County Office of Edu. Comments at 6-8.

some tangible way."[5] Similarly, the Iowa Department of Education observes, "Iowa is a state where many students live miles from town and ride the school bus to and from their school, often for nearly an hour each way. These students are dependent upon this mode of transportation and do not have the ability to stay after school to access the school or public library Internet. And often when they arrive at their rural home, there is no broadband available (or if available is too expensive for the family)."[6] For such students, mobile access simply is a necessity.

Given the recognized value of off-campus connectivity, commenters expressed concern that the NPRM seems to focus excessively on fiber at the expense of other important broadband technologies, including wireless. For example, The Los Angeles Unified School District criticizes the NPRM for "focus[ing] on funding fiber deployment within schools and community centers and providing only Wi-Fi connectivity at these locations, and … suggest[ing] that there may not be any funding for ANY 3G/4G/LTE connectivity (whether on or off-campus)," despite "the FCC's National Broadband Plan calling for modernization of E-Rate to cover mobile devices and off-campus connectivity."[7] Likewise, the Alaska Department of Education expressed concern that "[p]rioritizing fiber connectivity would penalize locations where fiber is not an affordable or available option."[8] CTIA shares these concerns,[9] along with other industry commenters. For example, Qualcomm points out that, without E-rate support for digital learning

[5] The Quilt Comments at 13.

[6] Iowa Dept. of Edu. Comments at 6.

[7] Los Angeles Unified School District Comments at 10.

[8] Alaska Department of Education Comments at 6.

[9] CTIA Comments at 7.

devices' mobile connections, we risk creating a "mobile divide" where some students are less prepared for today's mobile connected world.[10]

To address this concern, many commenters agree that the FCC should incorporate support for mobile broadband into the reformed E-rate program. Many urge the FCC to build on the demonstrated success of the E-rate Deployed Ubiquitously ("EDU") pilot program (also known as the "Learning on the Go" initiative), which provided funding for off-campus wireless access.[11] The Los Angeles Unified School District points to the Learning on the Go pilot program as a first step in implementing the National Broadband Plan's proposed modernization of E-Rate to cover mobile devices and off-campus connectivity.[12] Similarly, the Massachusetts Department of Telecommunications and Cable argues that the "FCC should … build upon information garnered from prior USF pilot programs," including the Learning on the Go program, which it cites, in order to "seek ways to promote digital literacy and/or fund devices for educational use by low-income students utilizing Lifeline funds."[13] A wide range of other commenters support building upon the Learning on the Go program.[14]

---

[10] Qualcomm Comments at 6.

[11] CTIA Comments at 8-9; Competitive Carriers Assoc. Comments at 7-12; Harvard Graduate School Comments at 1.

[12] Los Angeles Unified School District Comments at 10.

[13] Massachusetts Department of Telecommunications and Cable at 8, n.35.

[14] Harvard Graduate School Comments at 1 ("[W]e urge that the FCC change direction on its intended E-Rate limitations and return to the modernization policies exemplified by its own Learning on the Go program."); Competitive Carriers Association Comments at 7-11 ("CCA strongly encourages the FCC to consider the panoply of advantages of mobile wireless broadband and perhaps expand the EDU program for the benefit of all students, especially those in disadvantaged communities."); Qualcomm Comments at 3-4 ("Consistent with the recommendations of the National Broadband Plan, the proposals in the 2010 E-rate NPRM, and the successes demonstrated by the LOGO wireless pilot programs, the FCC should promptly authorize use of E-rate funding to enable schools to take advantage of the expanding options

III. THE RECORD SUPPORTS ALLOWING EDUCATORS, NOT REGULATORS, TO DECIDE WHAT TECHNOLOGY BEST FITS STUDENT NEEDS

As the discussion above shows,[15] mobile access is an integral part of ensuring that schools and libraries provide a connected 21st Century learning environment. As a result, the E-rate program should avoid favoring any particular technology and instead allow educators to implement the types of broadband connectivity that best meet their educational needs.

A. Educators' Comments Demonstrate That a 'One-Size-Fits-All' Approach Is Inappropriate

Educators offered a wide range of viewpoints regarding the appropriate technologies for E-rate supported broadband. This diversity of views demonstrates that educators face different needs and circumstances. Given these different needs and circumstances, the FCC should take a technologically neutral approach. This will permit the organizations and educators closest to the educational challenges at issue to pick the most appropriate solutions.

Many educators directly urge the Commission to remain technologically neutral because schools and libraries face different challenges in geography, funding, training, and other factors, and these different problems require a variety of technical solutions. "[T]here is not a 'one-size-fits-all' solution that can be branded as the most effective technology architecture in the state of California (and other states)," notes the California Department of Education.[16] The South

---

offered by ubiquitous mobile broadband connectivity."); Sprint Comments at 9-10 ("The Commission … approved the E-rate Deployed Ubiquitously (EDU) 2011 Pilot Program … [and] the Commission should build on this record by updating E-rate rules to provide support for off-campus digital mobile learning."); The Quilt Comments at 13 ("Building upon the … E-rate Deployed Ubiquitously (EDU) program, … the FCC should consider allowing a strategy where the school or library can become an after-hours hot spot. Further, the program should allow the school/library to invite a provider to share the school's E-rate funded infrastructure to deploy wireless Internet access service to the surrounding community.").

[15] *See supra* Section II.

[16] California Dept. of Edu. Comments at 8.

Dakota Department of Education points out that "[r]egulatory delay makes it impossible to keep up with the pace of emerging technology," and therefore, to keep pace with future developments, "[t]he FCC should not pick any particular technology and mandate that it be used."[17] Many educators and other commenters agree that the reformed E-rate rules should be technology neutral.[18]

Because there is no "one-size-fits-all" solution, many commenters agree that educators should have the flexibility to make technology decisions. "Education is a very personalized process per school and per child," notes the West Virginia Department of Education.[19] Similarly, the Alaska Department of Education says that "schools and libraries should be given the flexibility to select the best technology that fits their particular needs."[20] Likewise, the California Department of Education agrees that "every applicant's situation will be different" and concludes that "[a]pplicants should be encouraged and incentivized to choose the best and

[17] South Dakota Dept. of Edu. Comments at 8;

[18] State of Arkansas Comments at 14 ("Arkansas believes the Commission must remain technology neutral in which type of broadband connectivity is funded. … Remaining technology neutral addresses the needs of schools and libraries in areas where fiber is far less likely to be offered or available, such as Tribal lands."); E-Rate and Educational Services Comments at 2; Friday Institute Comments at 5 ("The Commission should remain technology neutral…"); Bureau of Indian Affairs/Education Comments at 4 ("The FCC should be technology neutral…"); State Education Technology Directors Association Comments at 21 ("To the extent possible, SETDA believes the Commission should be technology-neutral in its rulemaking, taking into consideration the rapid pace of innovation in products and services and not picking winners and losers in the marketplace by overly restrictive eligible services determinations.").

[19] West Virginia Dept. of Edu. Comments at 16.

[20] Alaska Dept. of Edu. Comments at 6.

most sustainable option available to them."[21] Many other commenters agree that educators are best situated to decide which technologies are most appropriate for their given situation.[22]

Certain educators specifically note that fiber is not a one-size-fits-all broadband solution, and should not be preferred over other potential solutions. Fiber simply may not available in many rural areas across the U.S., note commenters from the education communities of Alaska, California, Kansas, Missouri, Nebraska, Nevada, and on tribal lands.[23] Even if fiber is available,

[21] California Dept. of Edu. Comments at 8.

[22] Clark County School District Comments at 7 ("It is recommended that the FCC set the broad goals for bandwidth while leaving the particular implementation details to the district. Rural schools may require alternative solutions when fiber or other common technologies are not available."); LCCHR Comments at 2 ("We agree with commenters who suggest adopting a technology neutral policy that would allow schools and libraries the flexibility to determine how best to allocate their E-Rate funding among various services."); The Quilt Comments at 7 ("Applicants should have the flexibility to use the best and most cost-effective technology for each location."); Kansas Dept. of Edu. Comments at 5 ("It seems most prudent to recommend that schools garner access in the most cost efficient manner available, which for some is through cellular providers.").

[23] Alaska Dept. of Edu. Comments at 5-6 ("Fiber is not an option for many locations in Alaska due to weather and geography. … Prioritizing fiber connectivity would penalize locations where fiber is not an affordable or available option."); California Dept. of Edu. Comments at 8 ("At this time, fiber connectivity is not an option for many small or rural schools and libraries in California due to the lack of infrastructure in remote locations."); Clark County School District Comments at 7 ("Rural schools may require alternative solutions when fiber or other common technologies are not available."); Kansas Dept. of Edu. Comments at 2, 5 ("In Kansas, there is currently not a statewide fiber infrastructure for K-12 schools to access. Further, a large number of public schools simply do not have access to fiber connectivity through their providers required to support the recommended broadband targets."); Missouri Research and Education Network Comments at 8-9 (noting that where fiber is currently unavailable, MOREnet is using wireless technologies as an interim strategy); Nebraska Office of the CIO Comments at 8 (finding that fixed wireless is acceptable if optical fiber is not feasible or proves to be cost-prohibitive); Bureau of Indian Affairs/Education Comments at 4 ("[T]he situation dictates; whatever is available must be leveraged as a viable means of connecting to the Internet.").

other technologies may be more cost-effective or otherwise more appropriate to the situation, other commenters observe.[24]

Even many educators that generally favor fiber solutions recognize the need for flexibility.[25] For example, the Mississippi Educational Technology Leaders Association acknowledges the benefits of using fiber optic cable but argues that "[o]ther technologies however, must be considered when the use of fiber is prohibitive or the goals can be met with bandwidth levels lower than those that currently must be provided via fiber."[26] Similarly, the Missouri Research and Education Network "has begun to utilize wireless technologies as an interim strategy until fiber is available and cost-effectively priced."[27] Likewise, the Kansas Department of Education "recommend[s] that schools garner access in the most cost efficient manner available, which for some is through cellular providers."[28] Other fiber supporters also recognize the need for flexibility that would allow educators to use other technologies.[29]

---

[24] Kansas Dept. of Edu. Comments at 5 ("It seems most prudent to recommend that schools garner access in the most cost efficient manner available, which for some is through cellular providers."); Missouri Research and Education Network Comments at 9 ("MOREnet has begun to utilize wireless technologies as an interim strategy until fiber is available and cost-effectively priced.") *See also*, ADTRAN Comments at 2-3, 8-9; AT&T Comments at 4; CenturyLink at 5; Competitive Carriers Association Comments at 1-2, 3-7; PCIA Comments at 7; Qualcomm Comments at 9; Sprint Comments at 4; TIA Comments at 3-4.

[25] Kansas Dept. of Edu. Comments at 2, 5; METLA Comments at 12, 14; Missouri Research and Education Network Comments at 8-9; Nebraska Office of the CIO Comments at 8 ("Fixed wireless, if scalable above 100Mbps, is also acceptable if optical fiber is not feasible or proves to be cost-prohibitive.").

[26] METLA Comments at 12.

[27] Missouri Research and Education Network Comments at 8.

[28] *Compare* Kansas Dept. of Edu. Comments at 2 and 5.

[29] *See, e.g.*, Illinois Fiber Resources Group Comments at 7; Sunesys Comments at 5-6; Internet2 Comments at 15.

B. Granting Educators Flexibility to Make Technology Decisions Is Consistent With the FCC's Key USF Principles of Competitive and Technological Neutrality

Given that a one-size-fits-all approach to broadband technology is unworkable,[30] competitive and technological neutrality must remain a central principle of the universal service program, as CTIA argued in its comments.[31] Funds for Learning explains why technological neutrality is a core E-rate principle:

> The E-rate program was founded on the principle of "technological neutrality." The authors of the program knew it would be problematic to dictate technology and telecommunications solutions to the thousands of unique schools and libraries scattered across the mainland of our country, Hawaii, Alaska, and territories that stretch half way around the globe.[32]

Not only is technology neutrality compelling policy, it is required by statute; as the Education and Libraries Networks Coalition argues, "the principle of technological neutrality, which the statute itself requires, remains vital…."[33] Similarly, the Schools, Health & Libraries Broadband Coalition states that "Section 254(h)(2)(A) explicitly directs the FCC to adopt competitively neutral rules to promote 'access to advanced service' by schools, libraries and health care providers,"[34] and the South Dakota Department of Education simply notes that "[t]he universal service programs are required to be technology neutral."[35] In addition to the educators

---

[30] *See supra* Section III.A.

[31] CTIA Comments at 8.

[32] Funds for Learning Comments at 53.

[33] Education and Libraries Networks Coalition Comments at 8-9 (citing 47 U.S.C. § 254(h)(2)(A); *Federal-State Joint Board on Universal Service*, CC Docket 96-45, Report and Order, 12 FCC Rcd 8776, 8801, ¶¶ 46–48 (1997) (Universal Service First Report and Order)).

[34] Schools, Health & Libraries Broadband (SHLB) Coalition Comments at 7 (referring to 47 U.S.C. § 254(h)(2)(A)).

noted above, a wide range of other commenters agree that E-Rate, as part of the universal service program, should be technologically neutral.[36]

IV. CONCLUSION

The Commission should update the E-rate rules to ensure that schools and libraries are able to purchase the services they need to deploy 21st century digital learning technology. Mobile broadband is an integral part of this new paradigm. CTIA urges the Commission to implement E-rate reform consistent with these comments by supporting mobile broadband solutions through a technologically neutral approach.

Respectfully submitted,

CTIA–THE WIRELESS ASSOCIATION®

By: */s/ Brian M. Josef*

Brian M. Josef
Assistant Vice President, Regulatory Affairs

Michael F. Altschul
Senior Vice President and General Counsel

Scott K. Bergmann
Vice President, Regulatory Affairs

CTIA – The Wireless Association®
1400 16th Street, NW, Suite 600
Washington, DC 20036

(202) 785-0081
www.ctia.org

November 8, 2013

---

[35] South Dakota Dept. of Edu. Comments at 8.

[36] ADTRAN Comments at 2-3, 8-9, 20; AT&T Comments at 4-5; CenturyLink Comments at 5; Competitive Carriers Association Comments at 1-2, 3-7; LCCHR Comments at 2; NCTA Comments at 9; PCIA Comments at 7; Sprint Comments at 3; TIA Comments at 3-4; Verizon Comments at 9-10; Funds For Learning Comments at 32; Sunesys Comments at 5-6.